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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/673,282 | 09/30/2003 | Sang Jin Yun | YHK-0120 | 4745 |
| 34610 | 7590 | 11/20/2006 | EXAMINER | |
| FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153 | | | | EISEN, ALEXANDER |
| | | ART UNIT | | PAPER NUMBER |
| | | 2629 | | |

DATE MAILED: 11/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/673,282 | YUN ET AL. | |
| | Examiner | Art Unit | |
| | Alexander Eisen | 2629 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 07 September 2006.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 and 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10 and 12-22 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 17 November 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Claim Objections

1. Claim 22 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 22 is a copy of previously presented (now cancelled) claim 11, the subject matter of which has been already incorporated into independent claim 1, and hence fails to further limit the subject matter of the parent claim 1.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-10 and 12-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Nunomura et al., US 7,023,406 B1, hereinafter Nunomura.

With respect to claim 1 Nunomura discloses a method of driving a plasma display panel, comprising the steps of setting the number of sustaining pulses in response to an average picture (see FIG. 1; col. 5, line 57 – col. 6, line 11), wherein the

period of the sustaining pulse is increased in a stepwise manner as said average picture level goes from a lower level into a higher level (as in any of FIGS. 1, 3, 4 and 8).

As pertaining to claim 2, the method step of setting the number of sustaining pulses includes setting the number of sustaining pulses in inverse proportion to an average picture level (as can be seen from FIG. 1 the number of pulses for APL level 7 is equal 500, for APL level 3, it is equal 1000 and so forth).

As pertaining to claim 3, the step of setting a period of sustaining pulses includes setting a high width of the sustaining pulse largely in proportion to an average picture level (see FIG. 2).

As pertaining to claim 4, the step of setting a period of sustaining pulses includes setting a low width of the sustaining pulse largely in proportion to an average picture level.

As pertaining to claim 5, as can be seen from FIGS. 1 and 2, the step of setting a period of sustaining pulses includes setting a low width and a high width of the sustaining pulse largely in proportion to an average picture level.

As pertaining to claim 6, a maximum period of the sustaining pulse is wider, by 0.5 microseconds to 10 microseconds, than a minimum period of the sustaining pulse (in FIG. 1 example the difference is $4 - 2.7 = 1.3 \mu\text{s}$).

As pertaining to claim 7, the period of the sustaining pulse is changed in at least partial region of said average picture level (partials regions 0-2 and 2-7 are shown in FIG. 1).

As pertaining to claim 8, the method further comprises the step of setting a minimum limit frequency at more than a desired average picture level such that said period of the sustaining pulse is limited to less than a certain width (FIG. 8; col. 10, ll. 4-40; note that the frequency limit is inversely proportional to the period of sustain pulses).

As pertaining to claim 9, the minimum limit frequency is set such that a maximum period of the sustaining pulse is widened, by $0.5 \mu\text{s}$ to $10 \mu\text{s}$, than a minimum period of the sustaining pulse (see discussion related to claim 6).

As pertaining to claim 10, the method further comprises the step of setting a maximum limit frequency at less than a desired average picture level such that said period of the sustaining pulse is limited to more than a certain width (500 kHz for $2.0 \mu\text{s}$ period in FIG. 8).

As pertaining to claim 12, see relevant discussion of claim 3, which is directed to the same invention.

As pertaining to claim 13, as it was discussed earlier, the high width of the sustaining pulse is changed in at least partial region of said average picture level.

As pertaining to claim 14, see discussion in relevance to claim 4 directed to the same invention.

As pertaining to claim 15, the low width of the sustaining pulse is changed in at least partial region of said average picture level.

As pertaining to claim 16 see relevant discussion of claim 1 which is directed to the same invention; see also FIG. 5 and related description.

Claims 17-19 include the limitations similar to claims 3-5 and therefore are rejected on the same grounds.

Claims 20-21 includes the limitations similar to those in claims 9-10 and therefore are rejected on the same grounds.

As pertaining to claim 22, the period of the sustaining pulse is increased in a stepwise manner as said average picture level goes from a lower level into a higher level (as in any of FIGS. 1, 3, 4 and 8).

Double Patenting

4. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

5. Claims 1-10 and 12-22 are directed to the same invention as that of claims 1-12, 17, 22, 26 and 31-36 of commonly assigned copending application 10/947,334. The issue of priority under 35 U.S.C. 102(g) and possibly 35 U.S.C. 102(f) of this single invention must be resolved.

6. Claims 1-10 and 12-22 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-12, 17, 22, 26 and 31-36 of copending Application No. 10/947,334. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

7. Claims 1-10 and 12-22 of this application conflict with claims 1-12, 17, 22, 26 and 31-36 of Application No. 10/947,334. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

Response to Arguments

8. Applicant's arguments filed 09/07/2006 have been fully considered but they are not persuasive. The Applicant argues that the prior art of record, namely Nunomura, does not teach the feature "the period of the sustaining pulse is increased in a stepwise manner as said average picture level goes from a lower level into a higher level". The examiner respectfully disagrees. The Figures 1-4 of Nunomura show in fact that the period of the sustaining pulse is increased in a stepwise manner as said average picture level goes from a lower level into a higher level. For instance FIG. 4 shows the period of sustain pulses is changed "stepwise" and equal to $4.0\mu s$ for $APL < 0-4$; $5.0\mu s$ for $4 \leq APL \leq 8$; and finally changes stepwise from the last value to $6.4\mu s$ for $APL > 8$. These three values – 4.0; 5.0 and 6.4 are in fact related as stepwise increased values for the average picture level going from a lower level (0) into a higher level ($APL > 8$). The rejection is maintained.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Eisen whose telephone number is 271-272-7687.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Alexander Eisen
Primary Examiner
Art Unit 2629

14-Nov-06